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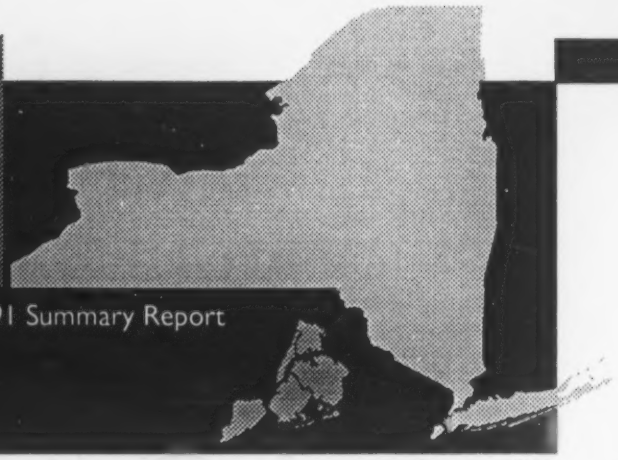
Behavioral Risk Factor Surveillance System



New York State 1991 Summary Report

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Contents

Methodology 2

Hypertension 3
Brian Fisher, PhD

Overweight and Weight Control Practices 5
Thomas A. Melnick, PhD
Deborah A. Spicer, RD., MPH

Physical Activity 7
Colleen Baker, BS
Bob Kasprzyk, MPA

Injury Control 9
Colleen C. McLaughlin, MPH

Seat Belt Use 11
Colleen C. McLaughlin, MPH

The Centers for Disease Control and Prevention (CDC) provide funding and technical assistance to the Behavioral Risk Factor Surveillance System (BRFSS) which was introduced in New York State in 1983 and has been conducted annually since 1985. Standardized questions developed by CDC are administered via a telephone survey. The 1991 BRFSS was conducted in forty-seven states plus the District of Columbia. This survey provides state-specific prevalence estimates of diseases and preventable behaviors attributable to early morbidity and mortality. These data are used to plan and promote health programs, support legislative decisions, and assess health-related behaviors.

The Behavioral Risk Factor Surveillance System - Summary Report is published quarterly. Issues will contain brief summaries on the risk factors included in each year's survey. Occasionally, issues will summarize special surveys, analysis of trends, and more in-depth discussion of specific risk topics. Copies may be obtained by contacting:

New York State Department of Health
BRFSS Coordinator
Bureau of Adult and Gerontological Health
Empire State Plaza, Rm. 557, Corning Tower
Albany, NY 12237

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Behavioral Risk Factor Surveillance System

Methodology*

The BRFSS administers a telephone survey to a sample of New York State residents 18 years and older. Respondents are selected randomly from all New York State residents with telephones, using a probability sampling method. We use a multistage cluster design procedure based on the Waksberg Random Digit Dialing Technique. After a household has been contacted, the respondent is randomly selected from those adults residing in the household. The survey is administered by trained interviewers using a Computer-Assisted Telephone Interviewing (CATI) system. This system improves data quality by allowing direct entry of responses on a computer file and controls the logical flow of the interview. Interviews are conducted primarily during weekday evenings and on weekends during two weeks every month according to an interviewing schedule designated by CDC.

Definitions

The following definitions are provided to better understand the BRFSS summary articles:

- **Sample Size**: the number of individuals who responded to the specific BRFSS question. The total sample participating in the 1991 BRFSS was 1923 respondents.

- **Prevalence**: the number of people reporting a given risk behavior divided by the sample of people asked the question, weighted to estimate the prevalence in the population. Reported prevalence ratios are weighted according to the probability of selection of the household and respondent, as well as the 1990 census population for age, race and sex.

- **Standard Error** (SE): a measure of the amount of variability that exists in the calculation of the prevalence estimate.

- **Confidence Interval** (CI): since these data were collected from a sample of the New York State population, some variation or imprecision is associated with each estimate. The 95% confidence interval is a range which contains the true population prevalence estimate 95% of the time, if repeated sampling of the population is performed.

- **Estimated 95% Confidence Intervals**: used as a conservative measure when exact confidence intervals are not available. The variance for each prevalence ratio was determined by multiplying the SE by 1.5. The estimated SE was then used to calculate the CI.

- **Response Rate**: the response rate is the number of completed interviews divided by the number of processed interviews. Processed interviews include completed interviews, refusals, and incomplete interviews. The response rate for 1991 BRFSS survey was 79%.

Limitations

Some important limitations to remember when interpreting the BRFSS data are:

- telephone surveys are generally not as effective as face-to-face interviews;

- These data are **self reported** and not based on actual examination or measurement; the validity of survey data may be affected by the respondent not answering honestly, not accurately recalling information, or not understanding the question;

- Since households must have a telephone to be considered, some population groups may be under-represented (for example, lower income groups); and

- when the data are classified by sociodemographic categories such as age, race, sex, marital status, education and income level, the sample sizes are smaller. Consequently, the cell sizes may be too small to make inferences to the general population.

**This information is included in the first report for each annual series.*

Behavioral Risk Factor Surveillance System

Hypertension

Brian D. Fisher, PhD (Bureau of Adult and Gerontological Health)

Introduction

The National Heart, Lung, and Blood Institute (NHLBI) has recently emphasized the importance of both diastolic and systolic pressure in the diagnosis of hypertension. Although both systolic and diastolic pressure have always been used, diastolic pressure was thought to be the more important of the two. It is now known that systolic pressure is as important in predicting heart disease as diastolic pressure. NHLBI advocates using a reading greater than or equal to 140 mmHg for systolic or 90 mmHg for diastolic as criteria for hypertension. Along with this new definition, NHLBI has also recommended the use of new terminology for the blood pressure classification scheme: The terms stage 1, stage 2, stage 3, and stage 4 are to replace mild, moderate, severe, and very severe, respectively. NHLBI believes that labeling stage 1 as mild led many people to not take their condition seriously.

Fifty million Americans - one in four adults - have high blood pressure. The prevalence of high blood pressure increases with age, is greater for blacks than for whites, and increases as education decreases. Among people over 60 years of age, 60 percent of non-Hispanic whites, and 71 percent of non-Hispanic blacks are hypertensive. Hypertension is a major risk factor for stroke, heart attack, blindness, and kidney failure. It can also result in pain during walking if leg arteries become clogged with deposits of fat from atherosclerosis. In 1990 alone, 75,710 people died from cerebrovascular disease in New York State.

Nationally, there has been a 50 percent and a 57 percent drop in deaths from heart disease and stroke, respectively, over the past twenty years. NHLBI has suggested this is partly due to the positive influence of hypertension intervention programs. Dr. Edward J. Roccella, a staff member of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, estimates that between the years of 1970 and 1990, diagnosis and treatment of high blood pressure has prevented approximately 180,00 fatal strokes.[1]

The strong association between hypertension and heart disease suggests the need for a national preventive program. One defense of such a program is based on evidence that development of complications from high blood pressure may begin while blood pressure is still in the normal range. NHLBI recommends that a prevention program target both the general population and focus on known populations prone to hypertension.[2]

The analysis that follows considers the extent to which New York State citizens are being screened for hypertension. It then presents the level of hypertension awareness in New York State.

Results

Table 1 presents the percentages, for the total population and for various demographic groups, that have had their blood pressure checked within the past year. The results suggest that almost 95% of the adult population have been checked recently. This rate was constant across various demographic factors.

Table 2 presents the proportion of respondents who have been told by a health professional they have high blood pressure. Nearly twenty-two percent of the adult population reported that a health professional has informed them that their blood pressure is high. Women (22.9%) and men (19.9%) reported very similar proportions. The data also show an increased occurrence of high blood pressure with age. Furthermore, the proportion of increase accelerates with age. For the 65 and over and the 55-64 age group, the percent with elevated blood pressure was 44.0 and 32.3 percent, respectively. In contrast, the proportion of hypertensives in ages 18-24 was 7.1 percent, and in ages 25-34 was 10.0 percent. The proportions for non-Hispanic whites and other races were comparable (21.0% and 22.8%, respectively). Adults with less than a high school education have the greatest risk of being hypertensive, but because of the large standard error in measurement, the differences between educational groups are not significant. This pattern holds true for income groups.

Table 1
BRFSS, 1991, Adults reporting having a blood pressure reading in the past year

Sociodemographic Characteristic		Weighted Percent	Est. 95% CI (+/-)
Total		93.9	2
Sex	Male	92.4	3
	Female	95.2	2
Age	18-24	93.3	5
	25-34	92.6	3
	35-44	89.7	5
	45-54	97.0	3
	55-64	96.7	4
	65+	96.3	3
Race/Ethnicity	White	96.4	2
	Non-White	92.6	4
Education	<High school	97.6	3
	High School graduate	92.9	5
	Some College	92.5	3
	College graduate	93.1	4
Marital Status	Married	93.1	3
	Sep/Div/Wid	97.1	2
	Never Married	93.3	4
Income	<$15,000	95.9	3
	$15,000-$24,999	92.9	4
	$25,000-$34,999	96.2	4
	$35,000+	91.8	4
Region	New York City	93.7	2
	Rest of State	95.7	4

Behavioral Risk Factor Surveillance System

Table 2

BRFSS, 1991, Adults reporting a health professional informed them they were hypertensive

Sociodemographic Characteristic		Weighted Percent	Est. 95% CI (+/-)
Total		21.5	6
Sex	Male	19.9	9
	Female	22.9	8
Age	18-24	7.1	19
	25-34	10.0	13
	35-44	15.8	14
	45-54	23.5	16
	55-64	32.3	15
	65+	44.0	12
Race/Ethnicity	White	21.0	7
	Non-White	22.8	11
Education	<High school	31.6	13
	High School graduate	21.3	10
	Some College	14.7	13
	College graduate	21.0	11
Marital Status	Married	19.5	9
	Sep/Div/Wid	37.2	11
	Never Married	14.3	12
Income	<$15,000	32.2	12
	$15,000-$24,999	21.0	14
	$25,000-$34,999	23.9	18
	$35,000+	17.5	12
Region	New York City	21.7	25
	Rest of State	22.9	26

Adults making less than $15,000 a year have a prevalence proportion almost 12 percent higher than any other income group; this higher level was not significantly different than for respondents whith lower incomes. Finally, there was not a substantial difference between New York City (21.7%) and the rest of New York (22.9%) in the proportion told they were hypertensive.

Discussion and Recommendations

These results suggest that intervention efforts in New York have been successful in at least informing the population of their blood pressure status. The vast majority of the adult population has had a blood pressure check in the past year. This is the important first step in addressing the problem of hypertension in New York. However, the estimated prevalence proportion shows that a large portion of the population is not controlling their blood pressure after receiving this information. Furthermore, the data suggest that this proportion remains high over many demographic groups. This supports NHLBI's recommendation for a preventative program targeting the entire population, supplemented by an effort to target specific high risk groups. This program should concentrate on proven modifiable lifestyle factors that are associated with hypertension. Such lifestyle modifications would included: tobacco avoidance, weight reduction, moderation of alcohol intake, increasing physical activity, modification of diet, and alleviation from stressful life events. Public health efforts need to consider ways of cultivating positive health attitudes in the population at large, and fostering more opportunities to live a healthy lifestyle. Special targeted populations should include the poor, elderly, and those with less education.

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[1] "U.S. seeks attack on hypertension." The New York Times. October 31, 1992.

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Behavioral Risk Factor Surveillance System

Overweight and Weight Control Practices

Thomas A. Melnik, DrPH (Division of Nutrition), Deborah A. Spicer, RD, MPH (Division of Nutrition) and Kathleen R. Head, BS (Division of Nutrition)

Introduction

An estimated 34 million adults age 20-74 in the United States are overweight.[1] The total economic cost of obesity in the United States was estimated at $39.3 billion in 1986, representing 5.5% of the total cost of illness.[2] This condition places individuals at increased risk for morbidity from heart disease, some types of cancer, diabetes, hypertension, and digestive diseases.[3] A number of studies have examined the effects of body weight on mortality. Most have demonstrated that mortality rises with increasing weight and experts generally agree that excessive body weight is associated with higher mortality.[4] Because of the health consequences of overweight, the Healthy People 2000 objective for the nation is to reduce overweight to a prevalence of no more than 20 percent among people aged 20 and older.[5]

The 1991 BRFSS included questions regarding weight status and weight control practices. Respondents reported their height and weight without shoes. The body mass index (BMI), defined as body weight in kilograms divided by the square of the height in meters (wt/ht2), was used as the indicator of weight status. Overweight was defined as a BMI > 27.8 for men and > 27.3 for women. These values represent the sex-specific 85th percentile of BMI for adults in the United States aged 20-29 years, estimated from the Second National Health and Nutrition Examination Survey.[1] Respondents were also asked if they were making attempts to lose weight. Those who reported trying to lose weight were asked if they were eating fewer calories or increasing physical activity.

Results

The findings from the 1991 BRFSS showed 24.2 percent of the adults in New York State were overweight (Table 1). This represents a relatively sharp increase in the prevalence of overweight since the 1990 BRFSS when it was estimated to be 20.0 percent. Those most likely to be overweight included males (26.7%), those aged 45-54 (32.0%), black non-Hispanics (37.7%), those with less than a high school education (36.1%), and those with incomes less than $15,000 per year (31.1%). Compared to other states participating in the 1991 survey, the prevalence of overweight in New York State ranked near the middle. The median prevalence of overweight for all 48 reporting states was 23.4 percent with a range of 17.8 - 28.7 percent.

More than one-third of all adults (37.2%) in New York State and 64.2 percent of those who were overweight reported trying to lose weight in 1991. Those most likely to report trying to lose weight were females (43.3%), those aged 45-54 (46.8%), Hispanics (41.0%), and those with incomes greater than $50,000 per year (46.6%). Of those trying to lose weight, 78.4 percent reported eating fewer calories and 46.9 percent had increased their physical activity. Just 37.1 percent were attempting to lose weight using the recommended combination of decreasing calories and increasing physical activity. Twelve percent reported attempting to lose weight, but were neither decreasing calories nor increasing physical activity (Figure 1).

Table 1
BRFSS, 1991, Adults who were found to be overweight based on BMI

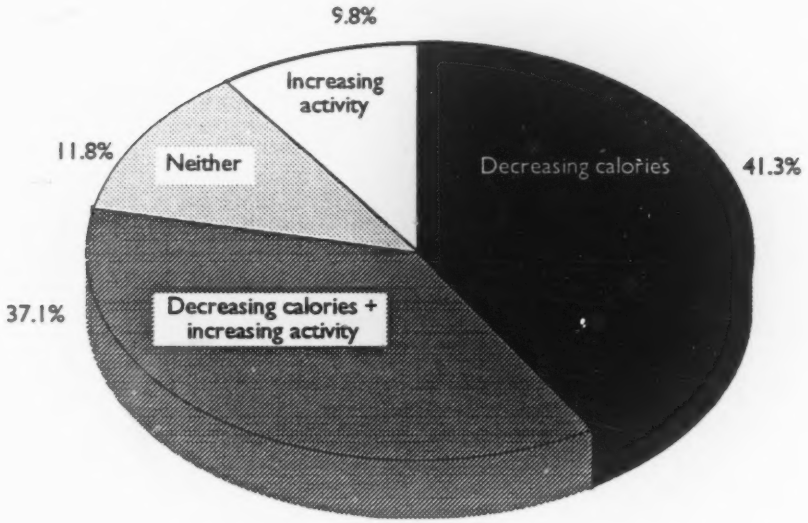
Sociodemographic Characteristic		Weighted Percent	Est. 95% CI (+/-)
Total		24.2	1.9
Sex	Male	26.7	3.0
	Female	21.9	2.4
Age	18-24	12.5	4.3
	25-34	21.5	3.8
	35-44	24.0	4.3
	45-54	32.0	5.9
	55-64	30.9	5.9
	65+	27.5	4.7
Race	White (non-Hispanic)	23.0	2.2
	Black (non-Hispanic)	37.7	6.1
	Hispanic	24.0	6.1
	Other	10.4	6.8
Education	<High School	36.1	5.6
	High School Graduate	25.0	3.4
	Some College	24.8	4.2
	College Graduate	17.1	3.0
Marital Status	Married	24.6	2.7
	Sep/Div/Wid	29.9	4.1
	Never Married	18.9	3.5
Income	< $15,000	31.1	4.7
	$15,000-$24,999	25.3	4.7
	$25,000-$34,999	25.6	5.8
	$35,000+	23.1	3.8

Discussion and Recommendations

The findings for the 1991 BRFSS raise concern about overweight in New York State. The statewide prevalence of overweight has increased by 4.1 percent since the 1990 survey, with estimated prevalence of overweight in 1991 exceeding 30 percent in some population subgroups, including black non-Hispanics and those in the low socioeconomic status. Also of concern is the fact that only 47 percent of those trying to lose weight were doing so by increasing their physical activity, and only 37 percent were using what is believed to be the most effective approach — a combination of reduced calorie intake and increased physical activity. Some of the respondents (12%) who were attempting to lose weight were neither decreasing calories nor increasing activity, suggesting that other, less desirable or unhealthful, forms of weight control are being practiced. Finally, the percentage of those trying to lose weight exceeded the percentage of those overweight, indicating the possibility some residents are inappropriately trying to lose weight.

These findings point to the need to redouble efforts to prevent overweight and to meet the Healthy People 2000 objective of 20 percent overweight statewide. Because of the difficulty in losing weight and maintaining weight loss, prevention of overweight to begin with should be a major public health initiative, particularly among young adults. Weight loss efforts should stress a combination

Figure 1
Weight control practices of those trying to lose weight



of decreasing caloric intake and increasing physical activity. Those trying to achieve or maintain an appropriate weight would benefit greatly by efforts to change the environment to ensure that low-fat, low-calorie food choices are widely available and to enhance opportunities for physical activity.

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[2] Colditz, Graham A. Economic costs of obesity. American Journal of Clinical Nutrition 1992; 55:503S-7S.

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Behavioral Risk Factor Surveillance System

Physical Activity

Colleen Baker, BS (Bureau of Adult and Gerontological Health)
and Bob Kasprzyk, MPA (Bureau of Adult and Gerontological Health)

Introduction

The level of physical activity is an important factor in the development and management of many chronic diseases. Studies have shown coronary heart disease, non-insulin dependent diabetes mellitus, moderate-to-mild depression, osteoporosis, hypertension and obesity are positively affected by regular physical activity. Sedentary lifestyle behavior is one of the most preventable risk factors of cardiovascular disease. Less active people are approximately twice as likely to die from coronary heart disease as physically active persons.[1] Regular physical activity can enhance a sense of well-being which can lead to healthy behaviors.[2,3]

Respondents of the BRFSS were asked whether they exercise and, if so, what type of activity, and how often that activity or activities are performed. Individuals were considered sedentary if they reported no physical activity or irregular activity.

Results

The 1991 BRFSS respondents reported the following levels of physical activity:

- 34.2 percent reported **no physical activity**;
- 24.2 percent reported **irregular physical activity** which is defined as those who exercise less than three times per week or less than 20 minutes per session;
- 35.0 percent reported **regular physical activity** meaning that they exercise 20 minutes or more three or more times per week but exercise less than 60 percent of their cardiores piratory capacity; and
- only 6.6 percent are meeting the **1990 health objective** for the nation (exercising the recommend 60 percent of the individual's cardiovascular capacity, at least 20 minutes three or more times per week).

These results show 58.4 percent of the population are estimated to be sedentary. As shown in Table 1, the prevalence of sedentary lifestyle varied among sociodemographic groups. People 65 and over were significantly more likely to be sedentary than the youngest respondents (70.1% vs. 47.2%). Persons with a high school education (64.4%) or less (71.9%) varied from those with some college/technical schooling (49.8%) and college/technical schooling or greater (51%). Adults who are married or an unmarried couple (66.6%) were more sedentary compared to those never married (49%). Also, those earning $15,000 or less (64.2%) are more likely to be sedentary than the higher group earning $35,000 or greater (56.1%).

About two-thirds of respondents (65.7%) reported some level of physical activity. Of those who reported some level of exercise or physical activity, walking was the most popular exercise (42.3%). Figure 1 shows the proportion who engage in walking as an exercise activity by age and sex. Other primary activities or exercises included aerobic classes (8.3%), running and jogging (7.8%), and bicycling (3.6%).

Discussion and Recommendations

In 1988 and 1989 the BRFSS data reported New York State as the most sedentary (75%). The proportions sharply declined in 1990 and 1991 to 63 percent and 58 percent, respectively. The median for all 48 participants was 57 percent. Although these rates look promising, over half of the population continues to practice unhealthy sedentary lifestyle behaviors. With the adoption of increasing physical activity, we can better manage those individuals with chronic diseases.

Continued and intensified promotion and support of exercise programs in the workplace, schools, and nursing homes are needed. Targeting education programs to the elderly, the unmarried, lower income and less educated groups could improve the behaviors of these high risk groups.

Table 1

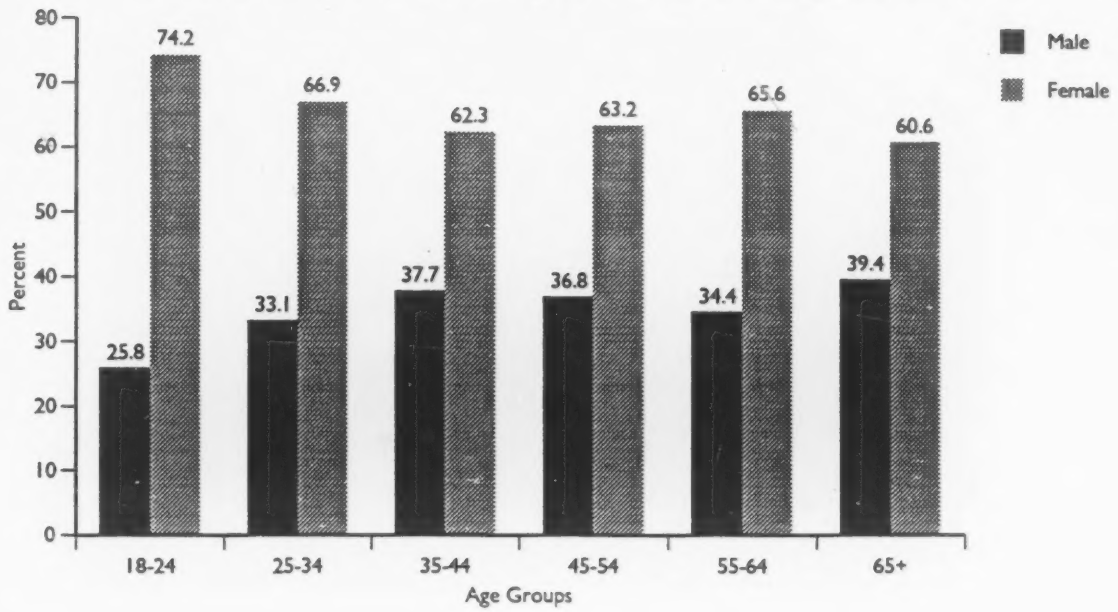
BRFSS, 1991, Adults reporting sedentary lifestyle behavior*

Sociodemographic Characteristic		Weighted Percent	Est. 95% CI (+/-)
Total		58.4	3.3
Sex	Male	57.2	4.5
	Female	59.5	3.8
Age	18-24	47.2	11.1
	25-34	53.9	9.4
	35-44	57.8	10.7
	45-54	58.8	12.2
	55-64	63.2	11.7
	65+	70.1	8.8
Race/Ethnicity	White, Non Hispanic	57.0	5.1
	Non-White	62.5	8.0
Education	<High school	71.9	14.6
	High School graduate	64.4	9.5
	Some College	49.8	10.2
	College graduate	51.0	8.7
Marital Status	Married, unmarried couple	59.8	6.1
	Sep/Div/Wid	66.6	7.7
	Never Married	49.0	9.6
Income	<$15,000	64.2	9.1
	$15,000-$24,999	66.0	9.3
	$25,000-$34,999	56.3	13.3
	$35,000+	56.1	9.0
Region	New York City	50.6	8.1
	Rest of State	56.6	3.8

**Sedentary lifestyle is defined as those respondents who did not exercise greater than 3 times per week, or more than 20 minutes a session during the month interviewed.*

Figure 1

BRFSS, 1991, Adults who chose walking as a means of exercise or physical activity



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[1] Centers for Disease Control. Coronary heart disease attributable to sedentary lifestyle— Selected states. MMWR 1990;39:541-544.

[2] Centers for Disease Control. The behavioral risk factor surveillance system. Reprints From MMWR January 1988;20-23.

[3] Centers for Disease Control. Chronic disease and health promotion. Reprints form MMWR, 1985-1989;3:15-18.

Behavioral Risk Factor Surveillance System

Injury Control

Colleen C. McLaughlin, MPH (Injury Control Program/Bureau of Cancer Epidemiology)

Introduction

Injuries are one of the leading causes of death and permanent disability among Americans in all age groups. Injuries disproportionately affect the young and the elderly because of their lack of ability to fully control their environment. Injuries account for more years of potential life lost than any other cause of death, including cancer and heart disease.

Among children, injuries are the number one cause of death and hospitalization. In New York State in 1990, 5,675 children under the age of ten were hospitalized for injuries, and 342 children died. The leading causes of injuries in this age group are falls, motor vehicle crashes, hot substance scalds, and poisonings.

Despite the conventional belief, most injuries are not "accidents." Injuries are common, predictable, and most importantly, preventable.

Results

Overall, the results of the 1991 BRFSS questions concerning injury control revealed that while the majority of respondents reported use of car safety seats for their youngest child, having home smoke detectors and knowledge of poison control center phone numbers, few respondents reported having checked the hot water temperature or having ipecac syrup in the household (Figure 1). In general, the proportion at-risk for injuries was higher among non-white respondents versus white respondents, among respondents residing in New York City versus those living in the remainder of the state, and among households with lower income levels (Table 1).

Smoke Detectors. Overall, 88.8% of respondents reported having a working smoke detector in the household. Slightly lower proportions were reported by respondents who lived in New York City, or were non-white. This is likely an overestimation of the proportion of households which have working smoke detectors because some respondents might not be aware of whether or not the batteries in their smoke detectors are functional.

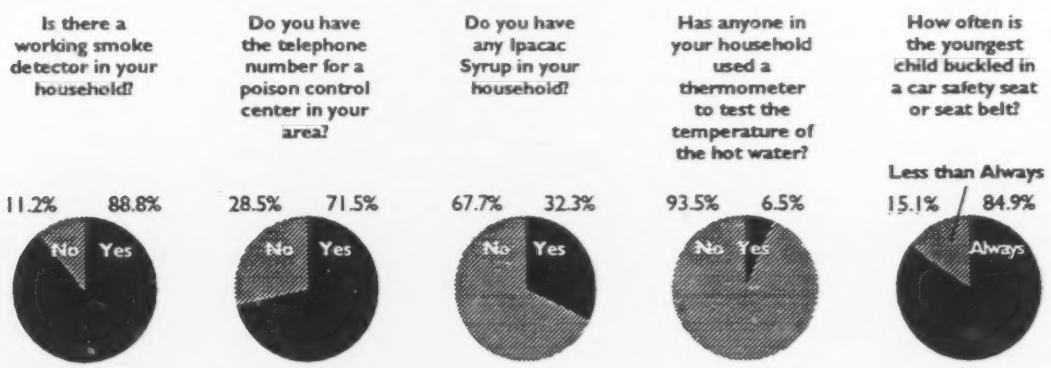
Hot Water Temperature. The proportion of respondents who reported that they or someone else in their household had checked the hot water temperature was generally low across all demographic characteristics. While only 6.5% overall had checked the hot water temperature, 9.8% of respondents in households where the youngest child was between the age of 1 and 10 reported having done so. The proportion of respondents age 65 and older who reported having checked their hot water temperature was 9.6%, while the proportion of respondents between the ages of 18 and 64 was only 5.2%.

Poison Control Center *[Asked only in households where youngest child was 10 years or younger].* While 71.5% of all respondents reported having the telephone number to a poison control center, only 52.5% of non-white respondents reported having the appropriate number. Correspondingly low proportions were reported by residents of New York City or those who had incomes of less than $15,000 per year.

Ipecac Syrup *[Asked only in households where youngest child was 10 years or younger].* The proportion of respondents who reported the presence of ipecac syrup in the household was 32.3%. The proportion reporting having ipecac syrup among non-white respondents was significantly lower than among white respondents (18.6 versus 39.8%).

Child Safety Seats and Seat Belts *[Asked only in households where youngest child was 10 years or younger].* The proportion of respondents who reported that the youngest child in the household was always buckled in a safety seat or seat belt was high for almost all demographic groups. The proportion using safety seats among non-white respondents was slightly lower than among white respondents. As with the other questions concerning injury control, the proportion of individuals at risk was higher in New York City than in the remainder of the state.

Figure 1
BRFSS, 1991, Injury Control



Behavioral Risk Factor Surveillance System

Table 1
BRFSS, 1991, Injury Control

Sociodemographic Characteristic		Working smoke detector		Test the temperature of the hot water		Poison control center phone number		Ipecac syrup in house		Safety seat or seat belt for youngest child	
		Weighted Percent	Est. 95% CI (+/-)	Weighted Percent	Est. 95% CI (+/-)	Weighted Percent	Est. 95% CI (+/-)	Weighted Percent	Est. 95% CI (+/-)	Weighted Percent	Est. 95% CI (+/-)
Total		88.8	2.1	6.5	1.7	71.5	6.2	32.3	6.4	84.9	4.8
Race	White, Non Hispanic	91.0	2.2	6.3	1.9	81.5	6.7	39.8	8.5	88.4	5.5
	non-white	82.4**	5.0	7.3	3.4	52.5**	11.3	18.6**	8.7	78.5**	9.1
Age of youngest child	<1 year	91.4	9.1	4.1	6.5	77.7	13.9	31.4	15.3	93.5	8.1
	1-4 years	87.6	13.7	9.8	12.5	71.5	19.0	41.4	20.7	90.3	12.4
	5-10 years	88.8	6.7	9.8	6.3	70.3	9.7	37.9	10.3	89.4	6.5
Income	< 15,000	83.9	5.7	7.8	4.2	56.1	17.4	29.0	16.2	77.3	14.7
	15,000-24,900	87.4	5.4	5.1	3.6	63.8	15.2	23.9	13.3	83.7	11.5
	25,000-34,90	89.0	6.2	4.8	4.3	81.4	15.2	35.7	18.5	85.2	13.7
	35,000+	88.8	4.3	7.8	3.7	72.9	12.1	25.9	11.8	84.8	9.5
Region	New York City	82.6**	2.4	5.2	4.1	55.9**	19.7	23.2**	16.6	79.6**	15.7
	Rest of State	91.5	2.4	7.0	2.2	80.7	7.0	40.4	8.7	89.3	5.4

** *Statistically significant difference.*

Discussion and Recommendations

There are a number of steps that can be taken within every household which could prevent injuries from occurring and greatly reduce the severity of injuries and the risk of death.

Smoke Detectors should be properly placed on every level of a house. The smoke detector should be checked monthly and cleaned periodically. The batteries on the smoke detector should be changing regularly. A good way to remember is to change the batteries when changing the clocks for daylight savings time. Smoke detectors are required in every residence by New York State law.

Water Temperature on hot water heaters should be set to no more than 120_ Fahrenheit. The temperature should be set when the heater is installed and checked periodically. Another common cause of scald injuries is hot liquids from cups or the stove. Hot liquids should not be consumed with a child on lap, and when using the stove, the pot handle should be turned towards the back of the stove.

Poison Control Center Telephone Number should be placed conspicuously by all phones. When calling the poison control center, be prepared to tell them the child's age, the kind of poison ingested as well as the amount and strength, how long ago the poison was taken, the symptoms the child is experiencing and any treatment that may have been given. It is important, however, to seek the guidance of the poison control center or a medical professional before giving any treatment.

Syrup of Ipecac is an inexpensive non-prescription liquid used to induce vomiting when certain poisons are ingested. Because not all poisons a child might ingest work in the same manner, this should not be used unless recommended by the poison control center or a physician.

Child Safety Seats and Seat Belts are required by New York State law. All children under the age of four must be placed in a child safety seat, and all children under 10 must be buckled into a seat belt at all times. In addition, all individuals in the front seat of automobiles must wear a seat belt.

Behavioral Risk Factor Surveillance System

Seat Belt Use

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Introduction

The use of seat belts has been shown to reduce the risk of death in motor vehicle collisions by 40 to 50% and the risk of serious injury by 45 to 55%.[1] In addition, seat belts have been shown to reduce the need for hospitalization after motor vehicle collisions by 65%.[2] Despite the widespread availability of seat belts, there is still a reluctance by many individuals to use seat belts while driving or as passengers in motor vehicles.

The failure to use seat belts can arise from a number of misconceptions. For example, there is an erroneous belief that wearing seat belts entails more risk than not wearing them. In fact, many seat belt related injuries are caused by improper use of seat belts.[3,4] Some common examples of seat belt misuse are wearing either the shoulder belt or lap belt alone, routing the shoulder harness under the arm or behind the back, wearing the lap belt too high on the abdomen and having too much slack in either the shoulder or the lap belt. A second misconception is that seat belts are not necessary under certain conditions, for example, when the car is equipped with an air bag, in the back seat of the car, in larger cars, trucks or vans, and for short trips. Air bags are only effective when used in conjunction with seat belts. Air bags are only effective in frontal collisions; they will not provide protection in side impact or roll-over crashes.

The Behavioral Risk Factor Surveillance System (BRFSS) has been collecting data on self reported seat belt use since 1983. Results from the BRFSS and other studies have shown consistent under-utilization of seat belts by certain subgroups of the population, including males, minorities, and younger people.[5,6]

Results

Overall, 80.5 percent of New Yorkers surveyed in 1991 reported always or nearly always using seat belts (Table 1). This is still short of the Year 2000 objective for the nation of use of seat belts by 85% of motor vehicle occupants.[7] Since the enactment of the mandatory seatbelt use law in New York State in 1985, the percentage of respondents who always or almost always use seat belts has remained between 76 and 81%.

In previous years, seat belt use was defined in BRFSS analyses as always or almost always using a seat belt. Individuals who reported that they sometimes, seldom or never use a seat belt were considered to be at risk for injury from non-use of seat belts. Because an individual is at risk of injury during each automobile trip taken without using a seat belt, the definition of seat belt non-use has been expanded to include those individuals who reported that they wear a seat belt with any frequency less than always. Only 65.6 percent of respondents to the 1991 BRFSS reported always wearing a seat belt.

Age. In general, seat belt use increased with age, with a slight decrease in use by individuals in the 55 to 64 year age group (Figure 1). Individuals 18 to 24 years of age have consistently had the lowest percentage of seat belt use throughout all the years of the BRFSS surveys. Not only do younger drivers have the lowest reported seat belt use, but they also have higher crash rates than the general population and therefore are at even higher risk of serious injury and death. In New York State in 1990, the rate of injuries due to motor vehicle crashes among residents 15 to 24 years of age was 126.1 per 100,000 residents, while the rate among individuals of all ages was 65.0 per 100,000. The fatality rate among individuals ages 15-24 was 12.9 deaths per 100,000 residents, while the fatality rate among all ages was 6.7 deaths per 100,000.[8]

Sex. Females tended to report more frequent use of seat belts than did males (Figure 2). In New York State in 1990, males experienced higher death rates (9.2 vs. 4.3 per 100,000) and injury rates (73.6 vs. 57.1 per 100,000) than did females.[8]

Other Characteristics. Reported seat belt use was lower among New York City residents than for the remainder of the state. A higher proportion of white respondents reported always using seat belts compared to non-whites, although this difference was not statistically

Table 1

BRFSS, 1991, Respondents who always use seat belts

Sociodemographic Characteristic		Weighted Percent	Est. 95% CI (+/-)
Total		65.6	3.2
Sex	Males	60.2*	5.1
	Females	70.3	4.1
Age	18-24	57.4	9.6
	25-34	61.6	6.8
	35-44	64.8	7.1
	45-54	70.2	8.8
	55-64	67.0	9.1
	65+	73.5	7.1
Race	White, Non Hispanic	66.8	3.7
	Non-whites	62.0	6.5
Education	< High School	66.0	8.6
	High School	63.3	5.7
	Some College	59.3	7.2
	College Grad	72.9	5.4
Marital Status	Married	69.1	4.4
	Sep/Div/Wid	65.5	6.4
	Never Married	57.3	6.8
Income	< 15,000	60.1	7.7
	15,000-24,900	57.6	8.1
	25,000-34,900	64.3	9.6
	35,000 +	68.7	6.3
Region	New York City	69.7	4.0
	Rest of State	59.6*	9.2

** Statistically significant difference, p<0.05.*

Behavioral Risk Factor Surveillance System

Figure 1
BRFSS, 1991, Seat belt use by age of respondent

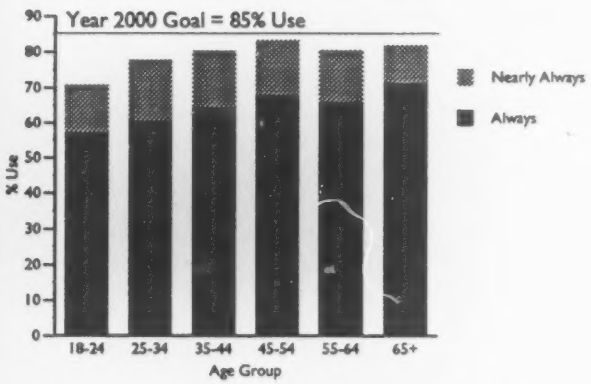
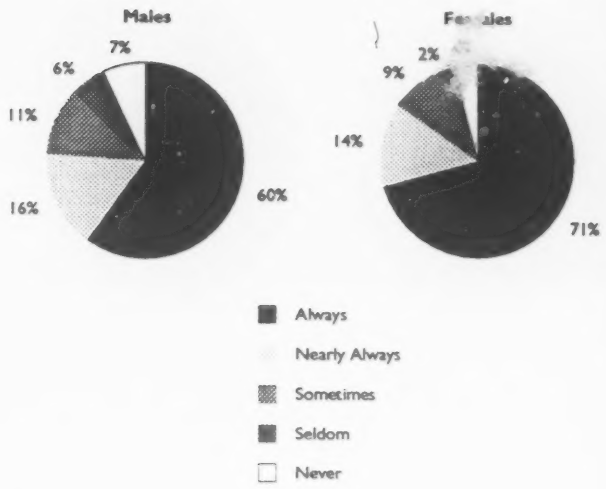


Figure 2
BRFSS, 1991, Seat belt use by sex of respondent



significant. Higher use was also reported by respondents who had graduated from college, by respondents with a household income over $35,000 a year, and by respondents who were married. The lower proportion of respondents always using seat belts who were never married or who had some college education, but not a college degree, might be explained by the fact that these individuals tend to be younger.

Discussion and Recommendations

The National Committee for Injury Prevention and Control has made a number of recommendations for reducing traffic related injuries.[9] With respect to seat belt use, the primary recommendation is for laws requiring the mandatory use of seat belts. In 1985, New York became the first state to pass a seat belt use law. Such laws have been shown to be effective in increasing seat belt use, but the most effective laws are those that have primary enforcement.[10] With primary enforcement laws, a driver can be stopped by the police for the lack of seat belt use alone. In the 1989 BRFSS, the states with primary enforcement laws, including New York, ranked as the top seven states for prevalence of seat belt use while the states with no laws governing seat belt use ranked as the bottom eleven for seat belt use. Mandatory use laws need to have high profile, ongoing enforcement in order to be fully effective.

Additional recommendations by the Committee include requiring seat belt use in fleet vehicles, education on the proper use of seat belts, and increased installation and availability of air bags for use in conjunction with seat belts. Educational and behavioral change interventions need to be gender, age and culture specific, and need to provide factual information about the proper use of seat belts and to counter myths and negative attitudes about seat belts.

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